



SECTION 616

TRAFFIC CONTROL PLAN

616.1 Description. This work shall consist of furnishing and installing traffic control devices in accordance with the contract and as directed by the engineer.

616.2 Material. All material shall conform to Division 1000, Materials Details, and specifically as follows:

Item	Section
Construction Sign and Reflective Material	1041
Flexible Non-Metallic Drum-Like Channelizers	1063

616.2.1 Flashing Electric Light. This unit shall be an 8-inch (200 mm) conventional traffic signal section meeting the requirements of [Sec 902](#). Each unit shall contain a yellow lens. The contractor shall furnish lamps for the flashing electric lights. Each unit shall contain a minimum 8-inch (200 mm) tunnel visor and be equipped for single section mounting. The flasher unit may be of the synchronous motor or NEMA solid state type operated on 120 VAC. Flashing electric lights which will become property of the Commission shall be controlled by NEMA solid state flasher units and be connected to a permanent power supply. Two-circuit flasher units shall be used to provide alternate flashing of the lights when mounted on barricades or bridges. Indications shall be flashed at not less than 50 nor more than 60 flashes per minute, with an approximate 50 percent on-off ratio. The contractor shall, at no cost to the Commission, provide all necessary connections to an electrical power source for operation of flashing electric lights.

616.2.2 Safety Requirements for Traffic Control Devices.

616.2.2.1 All traffic control devices shall conform to the criteria and standards of effectiveness as set forth in NCHRP 350. Category II and III devices shall meet test level 3 criteria.

616.2.2.2 The contractor shall furnish a manufacturer's certification that each type of traffic control device supplied complies with crash test requirements of NCHRP 350, Test Level 3 (TL-3) and has received FHWA acceptance. However, regardless if the unit meets NCHRP 350 criteria, the engineer reserves the right of final approval. Installation of a unit prior to the engineer's approval shall be at the contractor's risk.

616.3 Construction Requirements.

616.3.1 The contractor shall furnish, install, maintain, clean and relocate all signs, drums, cones, barricades, delineators, object markers, flashing arrow panels, channelizing devices, lights and other traffic control devices shown on the plans, or as directed by the engineer. All traffic control devices shall meet the requirements of the latest editions of the MUTCD and the *Missouri Quality Standards for Work Zone Traffic Control Devices*. Any unacceptable device shall be replaced by the contractor as soon as possible but not to exceed 24 hours after the contractor had been notified.

616.3.1.1 All signs, except the project terminal signs, shall be covered, set aside, turned, removed or relocated as work progresses or is completed and their necessity ceases to exist. Sign covering shall meet the requirements of the latest edition of the *Missouri Quality Standards for Work Zone Traffic Control Devices*. All traffic control devices shall be removed after completion of construction and shall remain the property of the contractor unless specified otherwise.

616.3.1.2 During any period of two hours or more that no person is present in the work zone to perform duties related to the work zone, all “Work Zone Fine” signs shall be covered such that they are not visible to the traveling public.

616.3.2 The contract will indicate the minimum requirements for traffic control. The contractor may, at no cost to the Commission, add to the traffic control plan any standard signs or traffic control devices the contractor considers necessary to adequately protect the public and the work.

616.3.2.1 Signs and sign quantities for blasting areas are not included in the contract traffic control plan. It shall be the contractor's responsibility and expense to furnish, install, maintain and remove blasting zone signing in accordance with the MUTCD. Placement of blasting area signing shall be subject to the engineer's approval.

616.3.2.2 Some projects require establishment of stage construction and the traffic control plans are developed accordingly. Work in any of the specified construction stages or other unrelated items of work may be accomplished concurrently with another specified stage provided that no interference with the prescribed handling traffic procedures will occur. The contractor shall submit traffic control plan revisions to the engineer should the contractor choose to deviate from the stages shown in the contract. All changes to the traffic control plan are subject to the engineer's approval and shall be verified in writing prior to implementation. Sign and device quantities shall be adjusted accordingly.

616.3.2.3 If the engineer determines the need for additional signs or other traffic control devices not included in the traffic control plan, the contractor will be notified in writing to provide the additional signs or devices. Reimbursement for authorized changes to the traffic control plan will be made in accordance with [Sec 104.3](#), unless covered by contract unit prices.

616.3.2.4 When the traffic control plan is initially implemented, and each time a significant change occurs in the plan or a new stage of the traffic control plan is implemented, the contractor and the engineer shall review the traffic flow through the project. Together, they shall drive through the traffic control zone(s) of the project in both directions, at least once each direction during both daylight and nighttime conditions within the next twenty-four hour period, to determine that traffic can safely and efficiently pass through the area covered by the traffic control plan, that all signs and traffic control devices are in place, visible and functioning properly, and that there are no hazards to traffic in or adjacent to the roadway which should be moved, eliminated or corrected. If it is determined that a deficiency exists, the contractor shall take corrective action as directed by the engineer. No additional payment shall be made for the contractor's compliance with this specification if the corrective action is within the requirements of the traffic control plan. The contractor will be compensated for any corrective action which is in addition to the requirements of the traffic control plan. A nighttime review of the traffic control devices is not required when only beginning and ending construction signs are in place.

616.3.2.5 The contractor shall make a visual inspection of the traffic control devices on sections of the project which are open to traffic and on sections which are adjacent to those sections open to traffic. This shall occur after the traffic control devices are in place to the

satisfaction of the engineer and the contractor as required by [Sec 616.3.2.4](#). This inspection shall ascertain that all traffic control devices and signs are in place and functioning properly, and that there are no deficiencies or corrections needed in the work zone. A brief written summary of this inspection shall be made and shall include but not necessarily be limited to the time of the inspection, the person performing the inspection, the general weather, roadway conditions and visibility and any deficiencies detected and changes or corrections made. If it is determined in this inspection that a deficiency exists in the traffic control plan, the contractor shall report it verbally to the engineer. The contractor shall submit a written summary of inspections performed to the engineer on a weekly basis.

616.3.2.6 All traffic control devices shall be inspected at least daily with the following exceptions:

(a) Non-portable construction signs and pavement markings on sections of the project with no project imposed speed limit restrictions shall be inspected at least weekly.

(b) Portable construction signs, including cones, flashing arrows and channelizers used with the signs, shall be inspected a minimum of two times each day. The interval between inspections shall not exceed six hours during active work.

(c) Traffic control devices in the work zone shall be reinspected after finding any physical evidence or other information suggesting an accident has occurred in the work zone.

616.3.2.7 The contractor shall give written notice to the engineer of any pedestrian or vehicular accident where physical evidence or other information suggests an accident has occurred in the work zone. The contractor shall obtain and provide to the engineer copies of law enforcement accident reports for any accidents in the work zone which may come to the contractor's attention.

616.3.3 All flagging operations, flagger attire, hand signals and traffic control devices shall be in accordance with the MUTCD. Flaggers shall be provided as specified in the plans or when equipment is crossing a road open to vehicular traffic. When two-way traffic is maintained over a single lane, each flagger involved in the traffic flagging operation shall be equipped with a portable, two-way, communications method approved by the engineer.

616.3.4 The length of time that the contractor may maintain the lane closures or one-way traffic operations shall be kept to a minimum and shall be subject to the engineer's approval. The contractor shall furnish the engineer a traffic control plan indicating the proposed method to achieve temporary stoppage of all traffic lanes if construction operations require such. The plan shall indicate any advance warning or regulatory signs, if used, and their locations; flagmen, if used, and their locations; and all other traffic control devices and their locations which may be used to stop all traffic. A one time payment for traffic control devices used to temporarily stop all traffic will be made at the unit price for those like items contained in the contract. No direct payment will be made for removing or reusing these particular signs as an indeterminate number of occasions for their use may occur. Traffic control devices used by the contractor which do not have a specific pay item in the contract shall be supplied, installed, maintained and removed by the contractor at no cost to the Commission.

616.3.5 The requirements of this specification shall not relieve the contractor of the responsibility for protecting both the public and the work. Should the contractor fail to clean, repair, replace or otherwise maintain the traffic control devices when directed to do so by the engineer, one or more of the following actions will be taken:

(a) The engineer may employ another agency to correct deficiencies in signing or warning devices and deduct the cost from the contractor's pay estimate.

(b) Suspend all pay estimates until deficiencies are corrected.

(c) Place the contractor in default if the situation continues after two written orders fail to produce favorable results.

616.3.6 The contractor shall ensure that work area lighting does not cause a blinding effect to drivers.

616.4 Basis of Payment. Signs and other traffic control devices specified in the traffic control plan or authorized by the engineer will be paid for at the unit price for each of the pay items included in the contract. No direct payment will be made for any incidental items necessary to complete the work unless specifically provided as a pay item in the contract. No direct payment will be made for cleaning, repair or replacement of traffic control devices.